



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,207	10/16/2001	Hideo Miura	500.34397CV2	4397

20457 7590 05/21/2003

ANTONELLI TERRY STOUT AND KRAUS
SUITE 1800
1300 NORTH SEVENTEENTH STREET
ARLINGTON, VA 22209

[REDACTED] EXAMINER

DANG, TRUNG Q

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2823

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)
	09/977,207	MIURA ET AL.
	Examiner	Art Unit
	Trung Q. Dang	2823

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 10 December 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) The period for reply expires 3 months from the mailing date of the final rejection.
- b) The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. The proposed amendment(s) will not be entered because:
 - (a) they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) they raise the issue of new matter (see Note below);
 - (c) they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see attachment.

3. Applicant's reply has overcome the following rejection(s): _____.
4. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. The a) affidavit, b) exhibit, or c) request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attachment.
6. The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. For purposes of Appeal, the proposed amendment(s) a) will not be entered or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

Claim(s) withdrawn from consideration: _____.

8. The proposed drawing correction filed on _____ is a) approved or b) disapproved by the Examiner.
9. Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. Other: _____.

Trung Q. Dang
Primary Examiner
Art Unit: 2823

Art Unit: 2823

1. The terminal disclaimer filed on 12-10-2002 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,326,284 has been reviewed and is accepted. The terminal disclaimer has been recorded.
2. Applicant's arguments filed 12-10-2002 have been fully considered but they are not persuasive.

With respect to the rejection of claims 15-17 under 35 U.S.C. § 103(a) over Kunikiyo in view of Chiu et al., applicants in page 6 of the Remarks argue that Kunikiyo disclosed that after forming a LOCOS oxide film, the nitride film 3 and the underlying oxide film 2 around the LOCOS are removed to expose the substrate 1, followed by heat treatment in nitrogen atmosphere. Kunikiyo does not disclose that a high temperature heat treatment is conducted while the substrate around the element isolation region is covered with an oxide film as in the present invention.

The Examiner respectfully disagrees with applicants' argument for the following reasons:

Applicants stated that the present invention performs the high temperature heat treatment while the substrate around the element isolation region is covered with an oxide film, yet claims 15-17 contain no limitation which indicates such oxide film (commonly referred in the LOCOS art as a pad oxide) has been formed on the surface of the substrate so that when the nitride mask is removed after formation of the element isolation oxide (LOCOS oxide), the pad oxide is exposed and around the LOCOS oxide. Note that the limitation "the oxide film" recited at line 4 of claim

Art Unit: 2823

15 refers to the “element-separating oxide film” (i.e. the element isolation oxide or LOCOS oxide) recited at line 2, not the oxide film that applicants stated in the argument. Moreover, the limitation “removal of an oxidation preventing film” (i.e. the nitride mask) does not necessarily mean an underlying oxide film will be exposed because the claim does not have a step of forming the underlying oxide film.

With respect to Chiu, applicants argue that Chiu shows growing a field oxide, and does not teach or suggest a subsequent heat treatment in an inert atmosphere to relax stress. However, in the rejection, the Examiner relied on Chiu’s reference for the teaching that the thermal oxidation for forming the element-separating oxide (field oxide) is known in the art to be carried out in an atmosphere of $H_2O + O_2$ or $H_2 + O_2$. The heat treatment in an inert atmosphere to relax stress is taught by Kunikiyo, not Chiu.

3) The amendment filed 12-10-2002 under 37 CFR 1.116 in reply to the final rejection has been considered but is not deemed to place the application in condition for allowance and will not be entered because:

- A) The proposed amendment is not deemed to place the application in better form for appeal by materially simplifying the issues for appeal.
- B) There is no convincing showing under 37 CFR 1.116(b) why the proposed amendment is necessary and was not earlier presented.

Art Unit: 2823

C) The proposed amendment raises new issues that would require further consideration and/or search. Prior to the proposed amendment of claims 18-27, claims 18-27 were rejected under 35 U.S.C. 112, first paragraph due to new matter added in the claims. No prior art could be used to formulate a rejection because of the new matter limitation. Now the proposed amendment further defines claims 18-27 so as to conform with the description, which raises new issues that would require further consideration and/or search.

4) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trung Dang whose telephone number is (703) 308-2548. The examiner can normally be reached on weekdays from 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri, can be reached on (703) 306-2794. The fax phone number for this Group is (703) 305-3432 or (703) 308-7725.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Trung Dang

Primary Examiner, Group 2800